



# Section G

## ***Spent Nuclear Fuel***

### **PROJECT MANAGERS**

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## INTRODUCTION

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, Work Breakdown Structure (WBS) 3.2.3.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of October 31, 2001. All other information is as of November 27, 2001, unless otherwise noted.

Fiscal year-to-date milestone performance (EA, HQ, and RL) shows two milestones due during fiscal year 2002. Additionally, there were two FY 2001 milestones overdue during FY 2002, one was completed in November and one remains overdue.

## NOTABLE ACCOMPLISHMENTS

**Fuel Movement Activities** — Two Multi-Canister Overpacks (MCOs) have been removed from K West (KW) Basin during October 2001.

**K Basins Construction Projects** — Activities conducted during this reporting period included:

- Awarded the contract for the design/fabrication of the Sludge Water System Cask, Transport and six Canisters.
- Awarded the contract for the Fuel Transfer System (FTS) Annex construction at K East (KE) and KW Basins.
- Completed installation of KW Basin SNF canister cleaner.
- Completed concrete sawcut and demolition for the annex construction.
- Completed 100 percent design for the FTS Roadway, Cask, and Annexes.
- Completed 90 percent design for FTS lift table, rails, and straddle carrier.

**Sludge Handling Modification Activities** — Activities included:

- Initiated construction of dry storage upgrades at T Plant.
- Issued contract for leveling base and liner system to be installed in the T Plant process cells.
- Received comments from RL on the revision to the T Plant Safety Assessment.

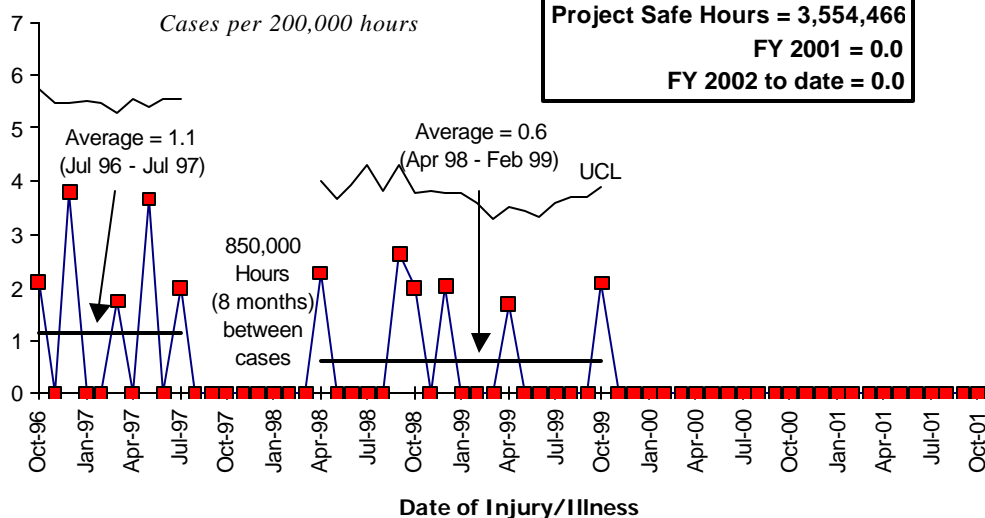
## SAFETY

Green

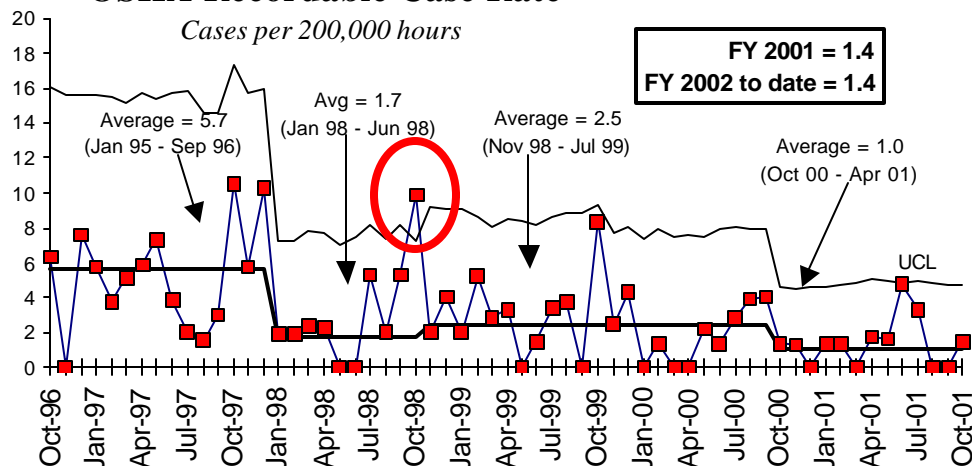
No Lost Away Workday injuries were reported within the Spent Nuclear Fuel (SNF) Project, thus allowing an achievement of more than 3.5 million safe work hours by the end of October. This performance can be attributed to the effective implementation of the Integrated Safety Management (ISM) System core functions of management commitment and worker involvement.

## SAFETY (CONTINUED)

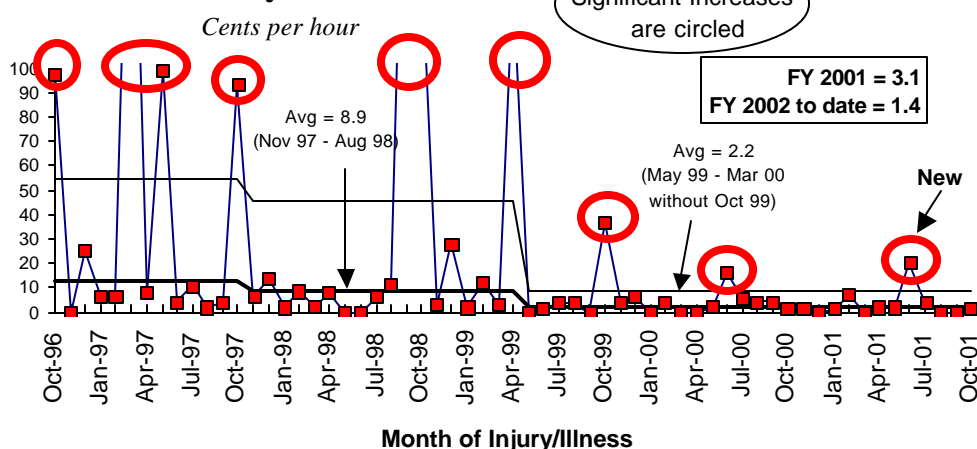
### Lost Away Workday Case Rate



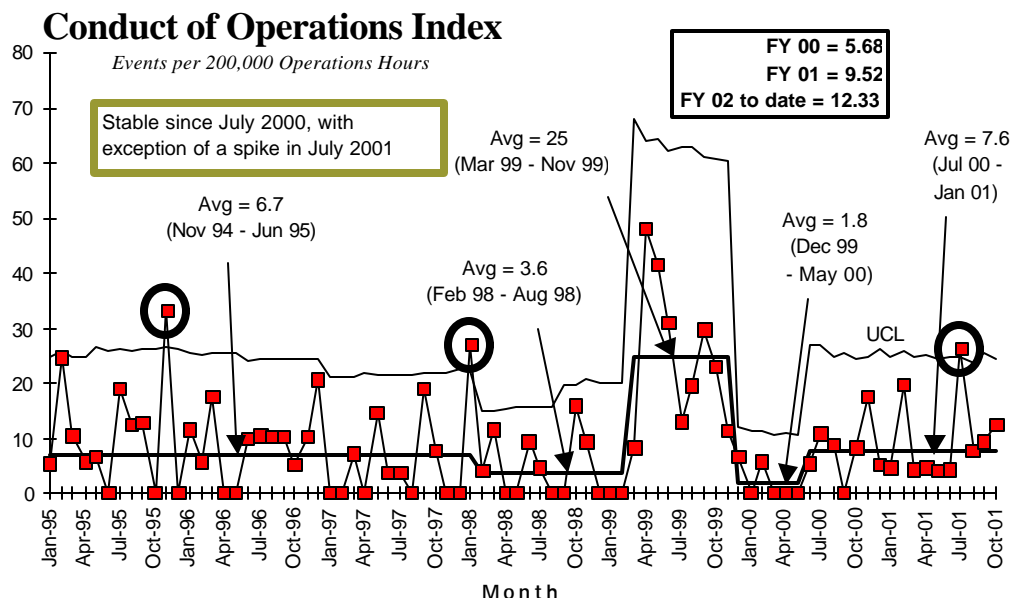
### OSHA Recordable Case Rate



### DOE Safety Cost Index



## CONDUCT OF OPERATIONS



In an effort to raise the Project's focus on worker safety and conduct of operations, a weekly review of lessons learned and occurrence reports is conducted at the opening of the SNFP senior staff meeting. The project continues to emphasize worker safety and conduct of operations with all project personnel.

## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

**Cold Vacuum Drying Facility (CVDF) Fuel Processing / Production Improvements** - The processing times at CVDF have been reduced from approximately 100 working hours per MCO to a current average of 88.1 working hours per MCO, 1.9 working hours less than the required target of 90 working hours. Options continue to be evaluated to ensure this average stays below the 90 working hour target.

**Deactivation Acceleration** - Initiated development of End Point Criteria, KE Basin Deactivation Alternative Study, and Data Quality Objectives and KE Basin Wall Sampling Analysis Planning.

### Opportunities for Improvement

**Fuel Processing at KW** - Efforts continue to reduce the fuel processing times at K West basin and the CVDF.

**K Basin Sludge Container and Storage Optimization** - Efforts to identify more cost effective KW container configurations and storage options could lead to the elimination of KW sludge storage in a pool at T Plant. The option to use a modified HIC for fuel piece and settler tank sludge (with strict mass limits) continues to be evaluated as a potential option.

## UPCOMING ACTIVITIES

**Canister cleaning operations** - Begin SNF canister cleaner operations in December 2001.

**K West Outage** - Perform K West Maintenance Outage in December 2001.

**200 Area ISA** - Implement 200 Area ISA authorization basis by January 2002.

**K West 24/7 Shift** - Implement K West 24/7 Shift Implementation on February 4, 2002.

**MCO shipments** - Continue MCO shipments through FY 2002.

## MILESTONE ACHIEVEMENT FH Contract Milestones

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/Comments
M-34-06-T01	"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"	EA	12/31/00		11/30/01	Delays resulted from design process improvements. No impact on operations expected.
M-34-26-T01	"Approve Start of Construction for the K East and K West Basin facility modifications for AFTS"	EA	09/30/01	11/16/01		Complete 11/16/01
M-34-29	"Complete K East Basin and K West Basin facility modifications for AFTS cask transportation system"	EA	3/31/02		03/31/02	Potential impact to schedule due to late subcontractor delivery of transfer system design, and unforeseen underground conditions at both basins.
M-34-17	Initiate KE to KW fuel transfer	EA	11/30/02		11/30/02	On Schedule
M-34-12-T01	"Complete construction of K East Basin Sludge and Water System to support spent nuclear fuel removal."	EA	9/30/02		9/30/02	On Schedule

NOTE: Above data includes all TPA/DNFSB/Performance Incentive milestones as included in the FH baseline, and provides Contract-to Date status.

## PERFORMANCE OBJECTIVES

### Move Fuel Away from the River

**EXPECTATION:** Remove spent fuel from K Basins

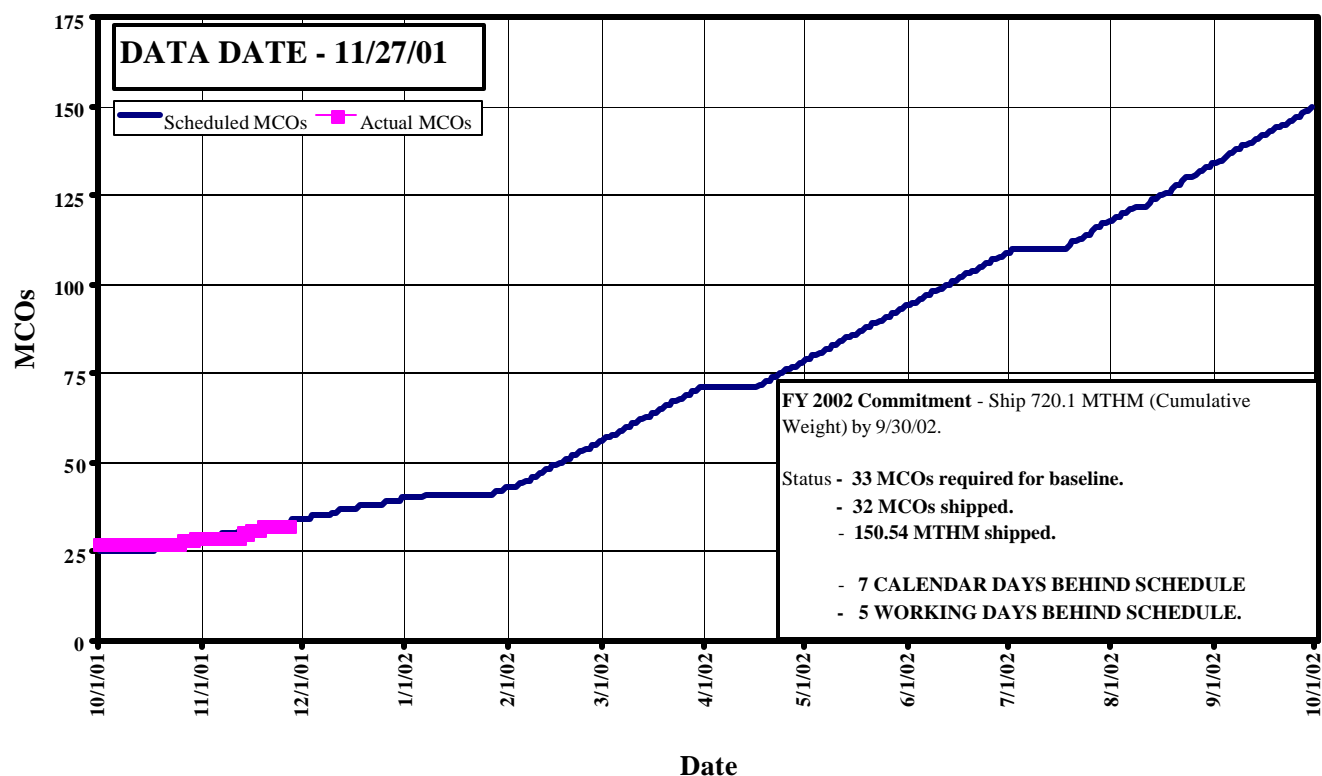
**Move 720.1 Metric Tons Heavy Metal from KW Basin by end of FY 2002**

**Status:** Currently 1 MCO and 4.07 MTHM behind schedule.

**Complete construction on Fuel Transfer System (FTS) by March 30, 2002**

**Status:** On schedule.

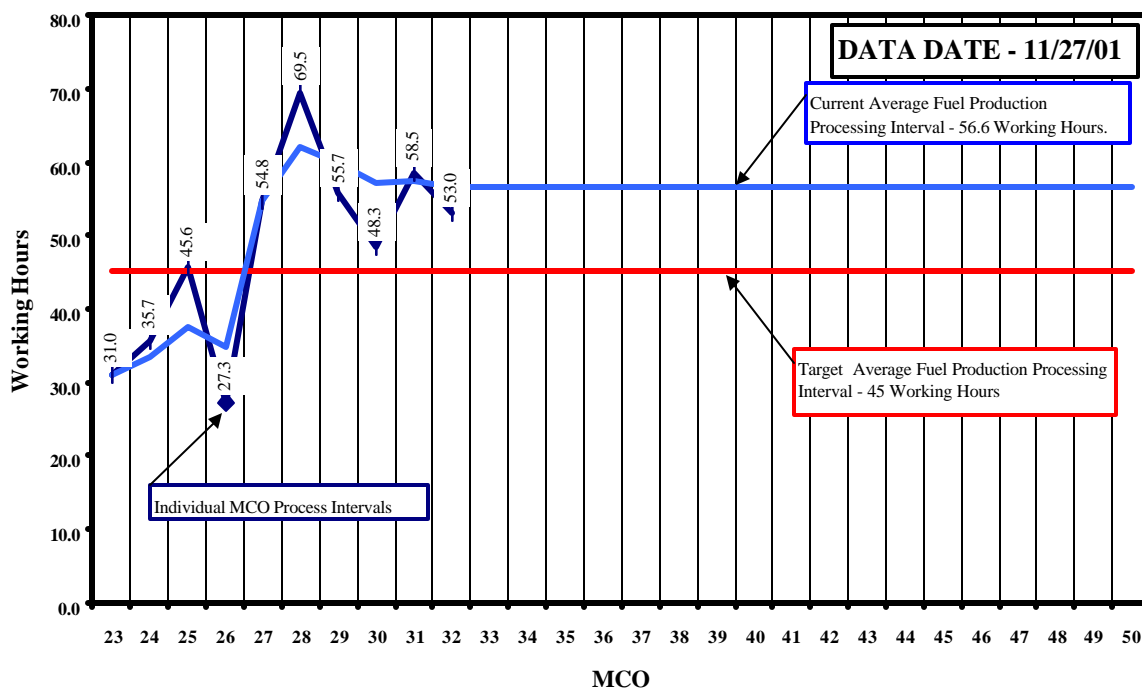
### FY2002 Actual MCO Production Versus Baseline Projections



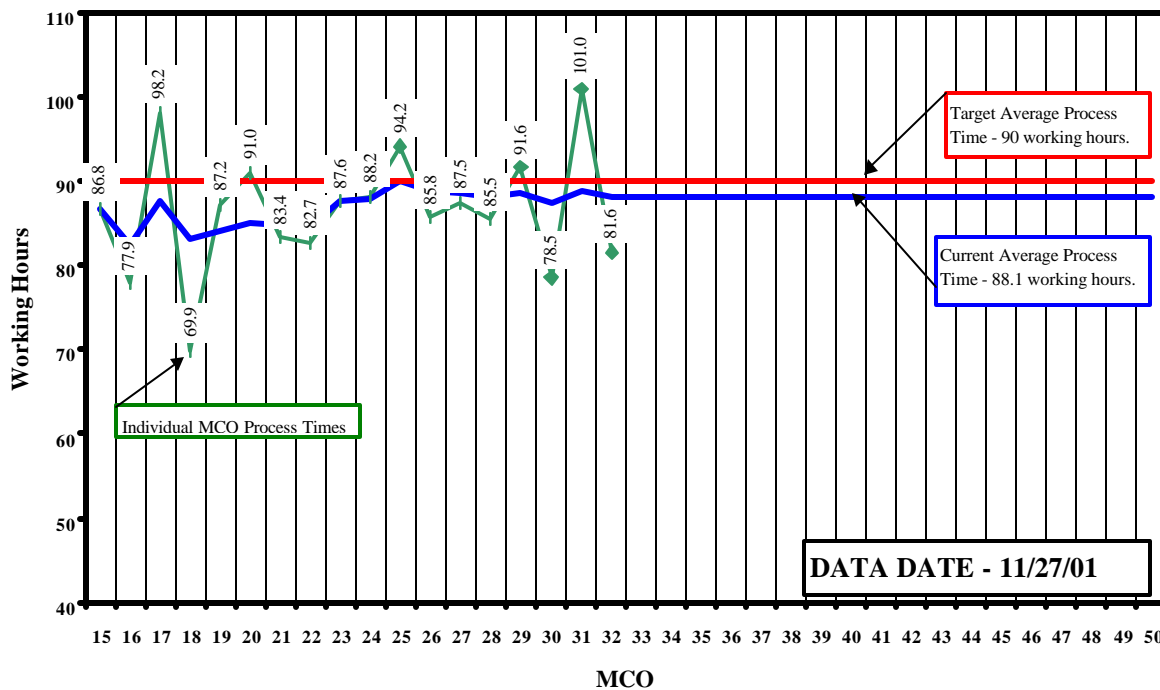
The average fuel production interval for MCOs 27 through 32 was 56.6 working hours, 11.6 hours over the production interval target of 45 working hours. The loss in production performance was due to equipment problems with the MLS loading machine.

## PERFORMANCE OBJECTIVES (CONTINUED)

Current 105K West MCO Fuel Processing Times

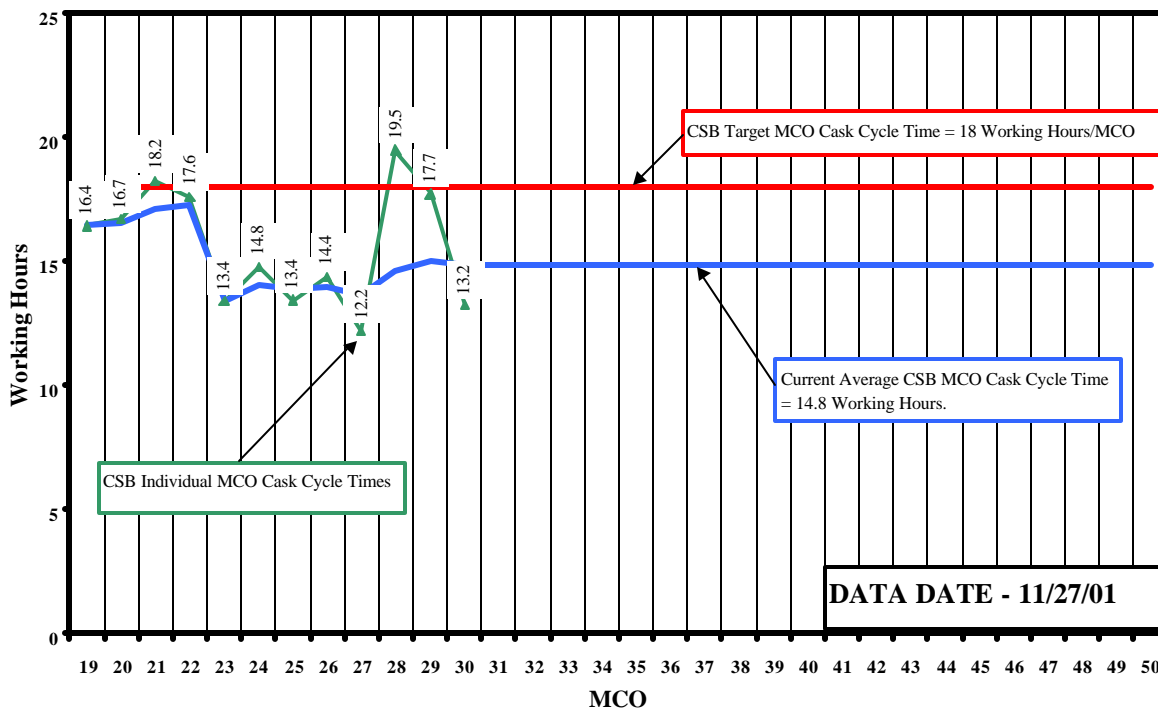


Current CVDF MCO Processing Times



## PERFORMANCE OBJECTIVES (CONTINUED)

Current CSB MCO Cask Cycle Times





## SCHEDULE / COST PERFORMANCE – ALL FUND TYPES FY TO DATE STATUS (\$000)

		FYTD							
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS RS03	SNF Project, 100 K Basins	\$ 6,466	8129	\$ 6,195	\$ 1,663	26%	\$ 1,934	24%	\$ 117,340
WBS 3.2.3.1									
PBS RS03	Canister Storage Building	\$ 644	\$ 763	\$ 372	\$ 119	19%	\$ 391	51%	\$ 8,346
WBS3.2.3.2	(to 2004)								
PBS RS03	200 Interim Storage Area	\$ 94	\$ 91	\$ 62	\$ (4)	-4%	\$ 29	31%	\$ 3,158
WBS 3.2.3.3	(to 2004)								
PBS RS03	SNF Project Management	\$ 3,070	\$ 3,052	\$ 2,597	\$ (18)	-1%	\$ 455	15%	\$ 41,519
WBS3.2.3.4	and Support								
<b>Total</b>		<b>\$ 10,273</b>	<b>\$ 12,034</b>	<b>\$ 9,225</b>	<b>\$ 1,761</b>	<b>17%</b>	<b>\$ 2,809</b>	<b>23%</b>	<b>\$ 170,363</b>

Due to technical difficulties, these performance numbers have been manually adjusted and may not align with HANDI reports.

## FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF Project FYTD favorable schedule variance is primarily driven by CSB production improvements being slightly ahead of schedule. The favorable cost variance is driven by start of FY 2002 accrual adjustments.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

### Schedule Variance Analysis: (+\$1.8M)

#### 3.2.3.1 100 K Basins (+\$1.7M)

**Description /Cause:** The favorable 26 percent schedule variance is due to recovery of the unfavorable variance from FY01.

**Impact:** None to report.

**Corrective Action:** None required.

#### 3.2.3.2 Canister Storage Building (+\$0.1M)

**Description /Cause:** The favorable 19 percent schedule variance is due to CSB production improvements being slightly ahead of schedule.

**Impact:** None to report.

**Corrective Action:** None required.

## Cost Variance Analysis: (+\$2.8M)

### 3.2.3.21 100 K Basins (+\$1.9M)

**Description/Cause:** The favorable 24 percent cost variance is due to FY 2002 start up accrual adjustments.

**Impact:** None to report.

**Corrective Action:** None required.

### 3.2.3.2 Canister Storage Building (+\$0.4M)

**Description/Cause:** The favorable 51 percent cost variance is due to FY 2002 start up accrual adjustments.

**Impact:** None to report.

**Corrective Action:** None required.

### 3.2.3.3 200 Area Interim Storage (+\$0.03)

**Description/Cause:** The favorable 31 percent cost variance is due to FY 2002 start up accrual adjustments.

**Impact:** None to report.

**Corrective Action:** None required.

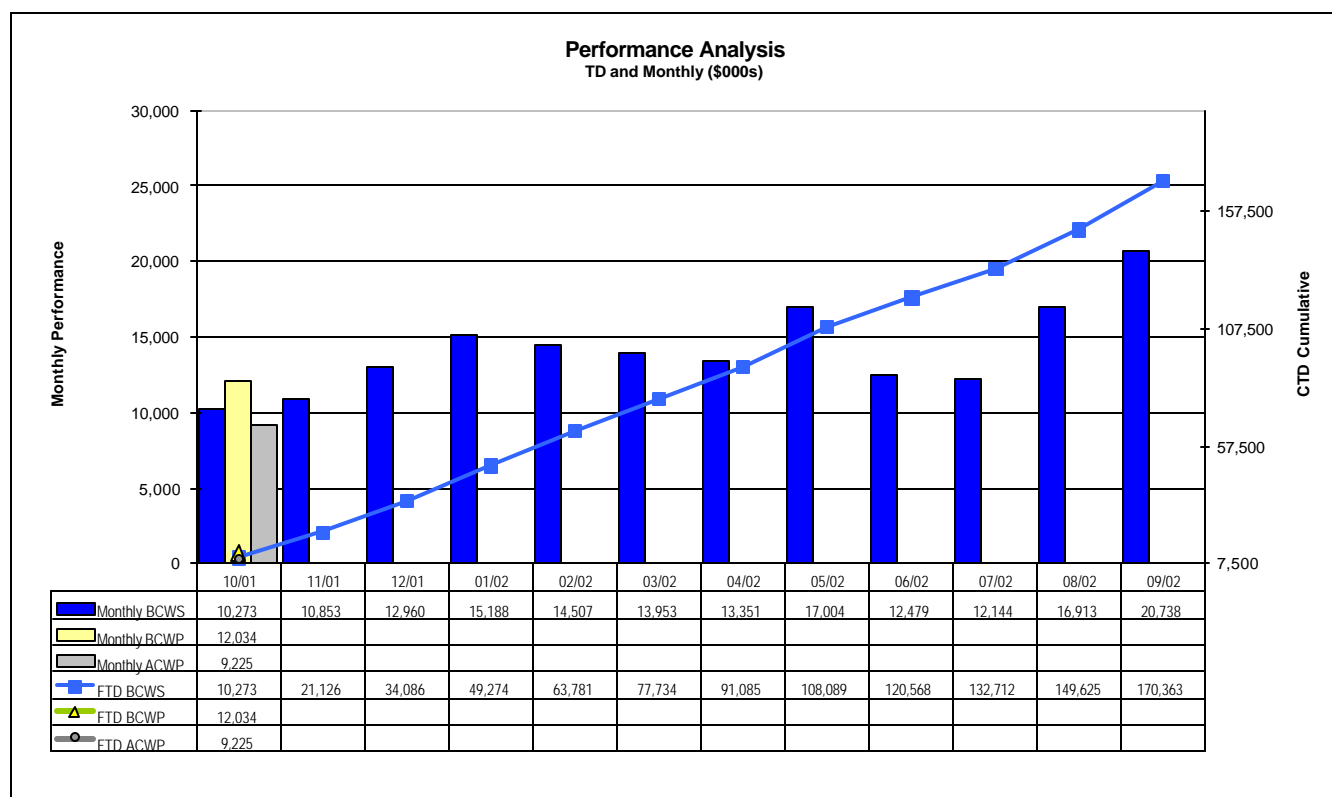
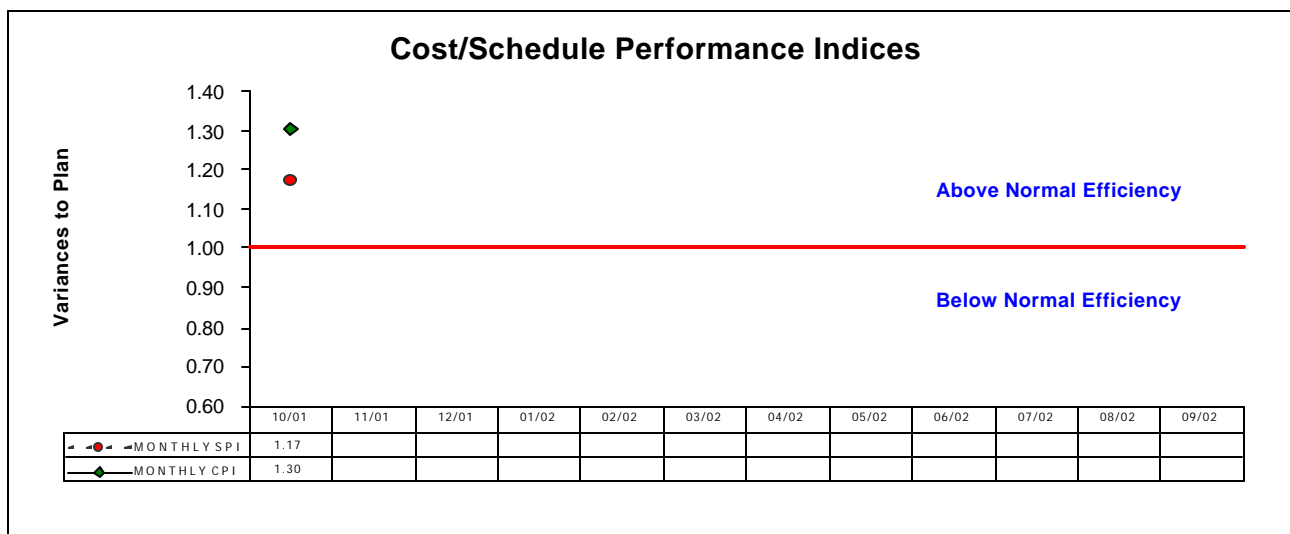
### 3.2.3.4 SNF Project Management and Support (+\$0.5M)

**Description/Cause:** The favorable 15 percent cost variance is due to FY 2002 start up accrual adjustments.

**Impact:** None to report.

**Corrective Action:** None required.

## SCHEDULE / COST PERFORMANCE (FISCAL YEAR TO DATE AND MONTHLY)



## ISSUES

### Technical Issues

**Issue:** Operations ramp-up for fuel scale fuel movement continues to be a challenge.

**Impact:** Hiring and retention of key resources at SNF are a concern given competing demands at Hanford.

**Corrective Action:** The SNF Project plans to go to 24/7 schedule on January 14, 2002. The recruitment of key personnel critical to meeting the fuel production schedule continues, and the resource candidate pool appears to be sufficient. Efforts to interview, hire, train and qualify Nuclear Process Operators, and identify and select Operating Engineers is near complete.

**Issue:** Equipment reliability continues to be a major concern for sustaining fuel movement.

**Impact:** Continued equipment failures may negatively impact meeting fuel movement commitments

**Corrective Action:** Phase I of the Reliability Evaluation is complete. Actions are being taken to implement recommendations. Examples: 1) Knock-Out Pot (KOP) on order; 2) Stingers on order; and 3) new design being considered.

**Issue:** Pre-existing conditions at KE and KW are holding up design and construction at annexes.

**Impact:** Potential impact to Milestone M34-29, due March 31, 2002

**Corrective Action:** Field evaluations and design accommodations complete. Evaluations are being finalized to assess potential impacts to Milestone M34-29. Equitable adjustment being considered.

**Issue:** Lift table and straddle carrier delivery date.

**Impact:** Potential Impact to Milestone M34-29 March 31, 2002

**Corrective Action:** Vendor selected, and being incentivized to support Project needs.

### Regulatory, External, and DOE Issues and DOE Requests

None to report.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

BCR No./ 4 WBS	Level	Date Originated	Description	Impact		Date Approved	Status
				Days	Dollars (\$000s)		
SNF-2001-014 R1		8/30/01	CSB Weld Station Acceleration		\$2,862		This BCR is scheduled to be cancelled.

NOTES: "Impact" refers to the impact in terms of the number of days or dollars changing from the 9/30/01 baseline.  
"Date Approved" refers to date of change as approved by final approval authority.